

Non-Vaporizing vs Vaporizing Sprays

High-Speed Schlieren Movies of Diesel Sprays

Parameter	Non-vaporizing	Vaporizing
Ambient O ₂ [%]	0	0
Ambient Temperature [K]	451	1000
Ambient Density [kg/m ³]	30	29
ΔP_{inj} [MPa]	138	139
Orifice Diameter [mm]	0.200	0.200

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Fuel is #2 diesel fuel. Injector tip to wall is 109 mm.

The vaporizing spray penetrates more slowly than the non-vaporizing spray. This is because the spray contracts as a result of cooling of hot entrained gases by fuel evaporation (Naber SAE 960034).

*For further information, contact Web Grand Pooh-Bar
Last Modified on February 28, 2007*